

CLAIMS

1. A computer program product, tangibly embodied in an information carrier, the computer program product being operable to cause data processing apparatus to perform operations comprising:

5 establishing a model, the model implementing application logic of an application;
 establishing at least one view for presenting the model;
 establishing at least one controller for manipulating the model; and
 establishing at least one storage area, the storage area relating to the controller and storing
an instance of a first data structure, the instance of the first data structure comprising
10 application data having been stored in the storage area by an access method, the first data
 structure having been declared prior to execution of the application.

2. The product of claim 1, wherein the controller relates to the view, the view comprises a user interface (UI) element, and the UI element is bound to the first data structure.

3. The product of claim 1, wherein the instance of the first data structure comprises one or
15 more node elements, each node element comprising one or more data fields based on the first
 data structure.

4. The product of claim 3, wherein one or more of the node elements are grouped into a node collection.

5. The product of claim 4, wherein one or more of the node elements in the node collection
20 are grouped into a node selection.

6. The product of claim 5, wherein one of the node elements in the node selection is identified as a lead selection element.

7. The product of claim 6, wherein the controller relates to the view, the view comprises a UI element, the UI element is bound to the first data structure, and the UI element displays
25 data from the lead selection element.

8. The product of claim 1, wherein the access method is part of an application programming interface (API) for accessing the instance of the first data structure.

9. The product of claim 1, wherein the operations further comprise:

5 establishing an instance of a second data structure, the second data structure having been declared to be a child of the first data structure prior to execution of the application.

10. The product of claim 9, wherein the instance of the first data structure comprises one or more node elements of a first type grouped into a first node collection, and the instance of the second data structure comprises one or more node elements of a second type grouped into a second node collection.

10 11. The product of claim 10, wherein one of the node elements in the first node collection is identified as a selected element, and wherein the node elements in the second node collection depend on the selected element.

12. The product of claim 10, wherein the second node collection has a state.

15 13. The product of claim 12, wherein the state is selected from the group of valid, invalid, and unfilled.

14. The product of claim 13, wherein the operations further comprise establishing a supply function for determining the content of the node elements in the second node collection when the state of the second node collection is invalid or unfilled.

20 15. The product of claim 14, wherein the supply function is implemented as a method of the controller.

16. A computer program product, tangibly embodied in an information carrier, for supplying data to a view presenting a model, the view having at least one user interface (UI) element and relating to a controller for manipulating the model, the computer program product being operable to cause data processing apparatus to perform operations comprising:

- 5 creating a run-time data structure in a storage area that relates to the controller, the run-time structure based on a design-time data structure, the design-time data structure including a structure element that is bound to the UI element; and
- using a supply function to provide content for the run-time data structure.

17. A computer program product, tangibly embodied in an information carrier, for accessing
10 application data by an application using a model of the application and at least one controller for manipulating the model, the computer program product being operable to cause data processing apparatus to perform operations comprising:

- providing a storage area that relates to the controller, the storage area being organized according to a design-time data structure having declared relationships between the
15 application data, and storing a run-time data structure that is based on the design-time data structure;

- accessing a structure element of the run-time data structure, the structure element comprising a node collection;

- evaluating the node collection; and

- 20 if the result of evaluating the node collection requires filling at least one element of the node collection:

- sending a query to a computer system; and

- in response to the query, receiving from the computer system at least one data instance that is used to fill the at least one element of the node collection.